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EXAMINER

KJM, JUNG W

ART UNIT PAPER NUMBER

2132

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13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/504,150

Applicant(s)

BUNN, MICHAEL GEORGE

Examiner

Jung W Kim

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-11 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-11 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 2-11 and 16 have been examined. Applicant has added new claim 16 and canceled claims 1 and 12-15 in the amendment filed on May 14, 2004.

Response to Arguments

2. Applicant's arguments with respect to claims 2-11 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 5 defines the step of reading the pre-printed bar code by a test certificate producer to print the printed test certificate; however, in parent claim 4, the referenced pre-printed bar code is defined as being established in the printed test certificate. This limitation does not distinctly claim the subject matter as enabled in the specification. Based on the enabling portions of the specification (see page 4, last paragraph-page 5, first paragraph), the claim should more clearly point out the pre-printed bar code to be originating as a serial number associated with a blank pass certificate that is transmitted

by the test certificate producer to the authentication authority, along with other information, whereupon receiving the authentication code from the authentication authority the test certificate producer prints the printed test certificate having the serial number contained in a bar code.

6. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the test certificate producer only prints the test certificate when the performed test receives a passing mark: as defined in the specification, when a vehicle passes a performed test, a test certificate is printed, else, a failure notice is printed (see specification, page 4, first full paragraph). Furthermore, this step is essential since a printed test certificate based on a failed test result obviates the test.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4, 6-11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. U.S. Patent No. 5,828,751 (hereinafter Walker) in view of Schneier Applied Cryptography 2nd Edition (hereinafter Schneier). As per claim 16,

Walker discloses a method for authenticating a printed test certificate comprising the following steps:

- a. a test certificate producer performs a test and cryptographically generates an authentication code from the information (see Walker, col. 3, lines 53-67; col. 4, lines 25-42);
 - b. the test certificate producer prints the test certificate when the authentication code is prepared, including both the information and the authentication code (see Walker, col. 4, lines 25-30; col. 16, lines 25-57, especially lines 33-36); and
 - c. upon presentation of the printed test certificate for authentication, a certificate checker cryptographically checks the authentication code against the information in the printed test certificate to determine whether the printed test certificate is authentic (see Walker, col. 11, lines 8-12; col. 16, lines 25-57).
9. Walker does not specify an authentication authority receiving information from the test certificate producer, verifying that the test certificate producer is allowed to take the test and if so, cryptographically generating an authentication code from the information, then sending the authentication code to the test certificate producer. However, these limitations are found in systems that incorporate a trusted arbitrator to perform the certification. Schneier teaches such an example wherein a first party transmits a message to a trusted arbitrator, the trusted arbitrator verifies the identity of the sender of the message, certifies the message, and transmits the signed message to a second party (see Schneier, page 35-36, 'Signing Documents with Symmetric

Cryptosystems and an Arbitrator'). Furthermore, Schneier teaches the use of digital signatures based on public-key cryptography and hashes of a message as a means for an arbiter to certify a message (see Schneier, page 186, 'certification authority', first paragraph; pages 38-39, 'Signing Documents with Public-Key Cryptography and One-Way Hash Functions'; page 35, 4th characteristic of a digital signature). It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Schneier to the method of Walker. Motivation for such a combination enables the method to centralize sensitive operations in a trusted party as taught by Schneier. Finally, in the case where the first and second parties are the same in the teaching of Schneier, the method covered by Walker in view of Schneier covers the applicant's claim. The aforementioned covers claim 16.

10. As per claim 2, Walker covers a method as outlined above in the claim 16 rejection under 35 U.S.C. 103(a). In addition, a bar code printer is used to print the certificate, wherein a bar code contains the authentication code (see Walker, col. 16, line 32). Further, a bar code reader is necessarily used to authenticate the authentication code contained in the bar code. The aforementioned covers claim 2.

11. As per claims 3 and 4, Walker covers a method as outlined above in the claim 2 rejection under 35 U.S.C. 103(a). In addition, the printed test certificate includes a pre-printed serial number, which is sent to the authentication authority, and wherein the authentication authority uses the pre-printed serial number in generating the

authentication code (see Walker, col. 8, lines 22-34; see Schneier, page 34, 'Signing Documents with Symmetric Cryptosystems and an Arbitrator', first step). Further, this serial number is included in the authentication code and hence, the bar code. The aforementioned cover claims 3 and 4.

12. As per claim 6, Walker covers a method as outlined above in the claim 16 rejection under 35 U.S.C. 103(a). In addition, the certificate checker performs the following steps:

- a. entering the authentication code into a computer (see Walker, col. 11, lines 11-12; col. 16, lines 46-57);
- b. entering information in the printed certificate into the computer (see Walker, col. 11, lines 8-9);
- c. causing the computer to cryptographically generate a check code from the information (see Walker, col. 11, lines 10-11); and
- d. causing the computer to compare the check code with the authentication code (see Walker, col. 11, lines 11-12).

13. Finally, inherent in a comparison test to check the validity of an authentication code is a generated message to indicate the success or failure of the validity check. The aforementioned covers claim 6.

14. As per claim 7, Walker covers a method as outlined above in the claim 16 rejection under 35 U.S.C. 103(a). In addition, the authentication authority

cryptographically generates the authentication code using a cryptographic key associated with the authentication authority (see Walker, col. 4, lines 25-42; col. 5, lines 49-65; see Schneier, page 35, 'Signing Documents with Symmetric Cryptosystems and an Arbitrator', page 36, 1st characteristic).

15. As per claim 8, Walker covers a method as outlined above in the claim 7 rejection under 35 U.S.C. 103(a). In addition, in an arbitrated method, a certification using a one-way hash necessarily uses a secret cryptographic key that is known by the authentication authority and the certificate checker, and not the producer. The producer must not know the secret cryptographic key, otherwise the producer would be able to generate hashes without the knowledge of the trusted arbiter and consequently defeat the purpose of an arbitrated certification methodology.

16. As per claim 9, Walker covers a method as outlined above in the claim 8 rejection under 35 U.S.C. 103(a). In addition, the authentication code is generated by performing a key-dependent one-way hash of the information, using the secret key (see Walker, col. 4, lines 25-29; col. 5, lines 49-57).

17. As per claim 10, Walker covers a method as outlined above in the claim 7 rejection under 35 U.S.C. 103(a). In addition, the authentication authority generates the authentication code using the private key of a public/private key pair, and wherein the

certificate checker checks the authentication code using the public key of the public/private key pair (see Walker, col. 5, lines 57-62).

18. As per claim 11, Walker covers a method as outlined above in the claim 16 rejection under 35 U.S.C. 103(a). In addition, the communication between the test certificate producer and the authentication authority is protected by encryption (see Schneier, page 35, 'Signing Documents with Symmetric Cryptosystems and an Arbitrator', steps 1, 2, 4, and 5).

Allowable Subject Matter

19. Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Walker et al. U.S. Patent No. 5,923,763.

Walker et al. U.S. Patent No. 6,289,453.

Isaak U.S. Patent No. 6,622,247.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (703) 305-8289. The examiner can normally be reached on M-F 9:00-6:00.

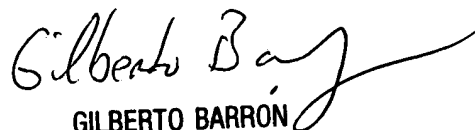
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim
Examiner
Art Unit 2132

Jk
June 24, 2004



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